

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C.20231
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 13 June 2000 (13.06.00)	
International application No. PCT/GB99/03361	Applicant's or agent's file reference PDG/20950
International filing date (day/month/year) 11 October 1999 (11.10.99)	Priority date (day/month/year) 09 October 1998 (09.10.98)
Applicant WARD, Graham	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

08 May 2000 (08.05.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia RANAIVOJAONA Telephone No.: (41-22) 338.83.38
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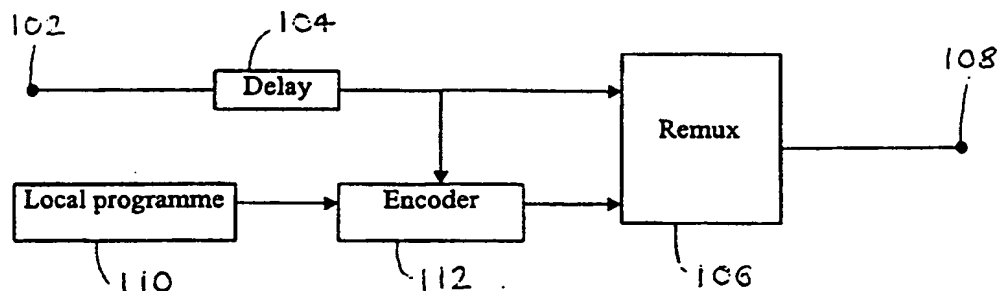
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : H04N 7/24, 7/58	A1	(11) International Publication Number: WO 00/22830 (43) International Publication Date: 20 April 2000 (20.04.00)
(21) International Application Number: PCT/GB99/03361 (22) International Filing Date: 11 October 1999 (11.10.99) (30) Priority Data: 9822087.4 9 October 1998 (09.10.98) GB (71) Applicant (for all designated States except US): SNELL & WILCOX LIMITED [GB/GB]; 6 Old Lodge Place, St Margaret's, Twickenham TW1 1RQ (GB). (72) Inventor; and (75) Inventor/Applicant (for US only): WARD, Graham [GB/GB]; 14 Tressilian Way, Woking, Surrey GU21 3DL (GB). (74) Agents: GARRATT, Peter, Douglas et al.; Mathys & Squire, 100 Gray's Inn Road, London WC1X 8AL (GB).		(81) Designated States: AU, CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: DATA COMPRESSION UNIT CONTROL FOR ALIGNMENT OF OUTPUT SIGNAL

(57) Abstract

To enable a single programme in a multiple programme MPEG transport stream (MPTS) to be replaced seamlessly by a locally generated programme, the local coder received the MPTS as a reference signal and outputs transport packets in alignment with the packets of the programme to be replaced. Timing and other packet parameters are also copied.



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DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

INTERNATIONAL SEARCH REPORT

onal Application No

PCT/GB 99/03361

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N7/24 H04N7/58

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N H04J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	GB 2 327 548 A (BRITISH BROADCASTING CORP) 27 January 1999 (1999-01-27) abstract page 3, line 11 -page 3, line 25 page 4, line 24 -page 5, line 7 figures 1,2 ---	1-4, 6, 9-12, 14, 17-20, 22
Y	WO 97 08898 A (BRITISH BROADCASTING CORP ;WELLS NICHOLAS DOMINIC (GB)) 6 March 1997 (1997-03-06)	1-27
A	abstract page 4, line 8 -page 5, line 28 page 9, line 25 -page 11, line 4 page 13, line 3 -page 13, line 8 figures 3,4 --- -/--	28-34

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 February 2000

Date of mailing of the international search report

08/02/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
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Fax: (+31-70) 340-3016

Authorized officer

Hampson, F

INTERNATIONAL SEARCH REPORT

onal Application No

PCT/GB 99/03361

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WEISS S M: "SWITCHING FACILITIES IN MPEG-2: NECESSARY BUT NOT SUFFICIENT" SMPTE JOURNAL, US, SMPTE INC. SCARSDALE, N.Y., vol. 104, no. 12, 1 December 1995 (1995-12-01), pages 788-802, XP000543847 ISSN: 0036-1682	1-27
A	page 796, left-hand column, line 10 -page 796, right-hand column, line 22 figure 8	28-34
A	EP 0 589 657 A (CANON KK) 30 March 1994 (1994-03-30) column 3, line 47 -column 4, line 5 column 14, line 41 -column 14, line 51 figures 3,4	1-34

INTERNATIONAL SEARCH REPORT

ation on patent family members

onal Application No

PCT/GB 99/03361

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2327548 A	27-01-1999	AU 8449598 A	10-02-1999
		WO 9904571 A	28-01-1999
WO 9708898 A	06-03-1997	GB 2307613 A	28-05-1997
		AU 6825896 A	19-03-1997
		EP 0846396 A	10-06-1998
		EP 0923249 A	16-06-1999
		JP 11511605 T	05-10-1999
EP 0589657 A	30-03-1994	JP 7023353 A	24-01-1995
		JP 6104910 A	15-04-1994
		DE 69324873 D	17-06-1999
		DE 69324873 T	21-10-1999
		EP 0891083 A	13-01-1999
		ES 2132193 T	16-08-1999
		US 5796957 A	18-08-1998



REC'D 04 DEC 2000

WIPO

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PDG/20950	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/03361	International filing date (day/month/year) 11/10/1999	Priority date (day/month/year) 09/10/1998
International Patent Classification (IPC) or national classification and IPC H04N7/24		
Applicant SNELL & WILCOX LIMITED et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 10 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input checked="" type="checkbox"/> Certain observations on the international application 		
Date of submission of the demand 08/05/2000	Date of completion of this report 30.11.2000	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Loeser, E Telephone No. +49 89 2399 8482 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/03361

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

Description, pages:

1-16 as originally filed

Claims, No.:

1-34 as originally filed

Drawings, sheets:

1-7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/03361

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 32-34.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 32-34 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination report cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims 25-31

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/03361

	No:	Claims	1-24
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-31
Industrial applicability (IA)	Yes:	Claims	1-31
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/03361

1. General

The present application does not satisfy the criteria set forth in Articles 6, 33(2) and 33(3). Details of the objections are set out below.

2. Concerning Section VIII - Art. 6 PCT:

2.1. Lack of conciseness

The various definitions of the invention given in independent apparatus claims 17, 32 and independent method claims 1, 9, 25 are such that the claims as a whole are not concise, contrary to Art. 6 and Rule 6.1(a) PCT. It is considered that the invention could be drafted by way of a single apparatus claim, and a corresponding single method claim.

2.2. Claim 1

The claim includes the feature of "supplying to a reference input ... , a transport stream input ...", which feature is interpreted as follows: a transport stream is supplied to a reference input.

On the basis of this interpretation, the claim fails to clearly define the origin of the packets that are outputted in alignment with the nominated reference packets.

Moreover, the meaning of the feature "output ... in alignment with the nominated reference packets" is obscure as such.

Finally, the claim fails to establish a relationship between the compression inherently associated with the claimed controlling of a compression unit, and the nomination of reference packets etc.

For these reasons claim 1 contravenes Art. 6 PCT.

2.3. Claim 9

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/03361

The objections raised in paragraph 2.2 above against certain features of claim 1 also apply to corresponding features of claim 9:

E.g., since the term "those packets" lacks an antecedent in claim 9, it is not clear from which data stream the claimed "reference packets" and "output packets" originate.

For these reasons claim 9 contravenes Art. 6 PCT.

2.4. Claim 17

The objections raised in paragraphs 2.2. and 2.3 above against certain features of claims 1 and 9 also apply to corresponding features of claim 17.

Moreover, the operation of the claimed re-multiplexing is obscure as such.

Finally, it is not clear whether the compression unit addressed in lines 2 and 6 is identical or not identical with the compression unit mentioned in line 8.

For these reasons claim 17 contravenes Art. 6 PCT.

2.5. Claim 25

The objections raised in paragraphs 2.2., 2.3 and 2.4 above against certain features of claims 1, 9, 17 also apply to corresponding features of claim 25.

For these reasons claim 25 contravenes Art. 6 PCT.

2.6. Claim 32

Claim 32 fails to clearly define how/by which means precisely the claimed "fixed overall bitrate in which the instantaneous allocation of that bit rate amongst the programme transport stream is controllable" can be obtained.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/03361

In this context, the feature "generates a transport stream reference ... in which the relative occurrence of (reference!) packets ... reflects the desired instantaneous allocation of that bit rate" alludes to generating a transport stream with plural sets each consisting of reference packets only. These sets appear to be used in respective ones of the plurality of compression units.

However, it is not clear whether a compression unit is to receive a single bitstream (ie an individual programme transport stream in which certain packets are marked as reference packets to be maintained in the overall output) or two separate bitstreams (ie an individual programme transport stream and a reference bitstream corresponding to a set from the controller, wherein the reference packets control the packet selection from the program transport stream).

Moreover, at least some of the objections raised in paragraphs 2.2., 2.3 and 2.4 above against certain features of claims 1, 9, 17 also apply to corresponding features of claim 32.

For the reasons given above, claim 32 contravenes Art. 6 PCT due to lack of clarity and failure to provide all the features that are essential to the (alleged) invention.

2.7. Claims 28, 30

The additional features of claims 28 and 30 correspond to features provided with claim 32. Hence, the objections under Art. 6 PCT raised in paragraph 2.6 above against claim 32 correspondingly apply.

3. Concerning Section V - Articles 33(2) and 33(3) PCT

3.1. Prior Art

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/03361

The following documents are cited:

D1: SMPTE J. 104 (1995), Dec., No.12, pp. 788-802;

D2: WO-A-07/08898;

D3: GB-A-2 327 548 (Document acc. to Rule 64.3 PCT:

effective filing date: 18.07.97, publishing date: 27.01.99).

D1 pertains to digital video switching/splicing/multiplexing. In detail (Figs. 6, 8; p.796), D1 discloses providing two bit streams one of which is to be inserted into the other, effecting splicing operations and re-multiplexing to form a new output stream. The splicing inherently requires identifying/referencing/nominating packets to be inserted in the output stream.

D2 also pertains to digital video switching. Fig.4 discloses supplying a transport stream (Bitstream A) with respective transport packets to a reference input (at 54) of a splicing and compression unit (58, 64), nominating (by switch 58) a set of transport packets as reference packets, and outputting packets (R; output bitstream) "in alignment with the reference packets".

3.2. Claims 1, 9, 17

Each of claims 1, 9, 17 is cast in such broad and obscure terms that its subject-matter appears to be anticipated (Articles 33(2) and 33(3) PCT contravened) by the disclosure of any of prior art documents D1 and D2.

3.3. Claim 25

The presently available prior art does not appear to disclose a plurality of compression units as claimed. Accordingly, the subject-matter of claim 25 is considered novel (Art. 33(2) PCT).

The skilled-person confronted with the obvious task of merging a plurality of digital transport streams and starting with a

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/03361

design disclosed in D1 or D2 would arrive at the subject-matter of claim 25, as far as can at present be construed, without exercise of an inventive step. Thus claim 25 contravenes Art. 33(3) PCT.

3.4. Claims 32-34

In view of the obscurities of the claimed subject-matter (cf paragraph 2.6 above) it is not at present possible to examine claims 32 as well as claims 33 and 34 with respect to novelty and inventive step.

3.5. Dependent claims 2-8, 10-16, 18-24, 26-31

3.5.1.

The additional features of claims 2-8, 10-16 and 18-24 as far as these can at present be construed are considered to be anticipated by explicit and implicit disclosure of document D1 or D2, that is from the interpretation of these documents by the skilled reader.

Thus these claims contravene Articles 33(2) and (3) PCT.

3.5.2.

The additional features of claims 26 and 27 as far as these can at present be construed are considered to be anticipated by explicit and implicit disclosure of D1 or D2, that is from the interpretation of any these documents by the skilled reader.

The additional features of claims 29 and 31 as far as these can at present be construed are considered not to extend beyond the normal design options of the skilled person in light of the presently available prior art.

Hence, claims 26, 27, 29 and 31 are considered to contravene Art. 33(3) PCT.

3.5.3.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/03361

The obscurity of the additional features of claims 28 and 30 identified in paragraph 2.7 above is such that at least inventive subject-matter cannot at present be identified therein. Accordingly, these claims contravene Art. 33(3) PCT.

4. Concerning Section VII: Description and other belongings

4.1. The claims are not cast in the two-part form as required by Rule 6.3(b) PCT.

4.2. The claims are not complemented with reference signs (Rule 6.2(b) contravened).

4.3. Documents reflecting the prior art described on page 1 are not identified in the description (Rule 5.1(a)(ii) PCT contravened).

4.4. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 cited above is not mentioned in the description, nor are these documents identified therein.

4.5 The drawings are not such that all of them can be reproduced at a 2/3 magnification factor as required by Rule 11.13(c) PCT. This is due to the hand-written reference signs and at least some of the drawn lines that are drawn at an insufficient line width.

In Fig.2, reference numbers for the switch array (212), and for the standalone packet request generator (210) are missing.

RAH

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PDG/20950	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 03361	International filing date (day/month/year) 11/10/1999	(Earliest) Priority Date (day/month/year) 09/10/1998
Applicant SNELL & WILCOX LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

DATA COMPRESSION UNIT CONTROL FOR ALIGNMENT OF OUTPUT SIGNAL

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1

None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/03361

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04N7/24 H04N7/58

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N H04J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	GB 2 327 548 A (BRITISH BROADCASTING CORP) 27 January 1999 (1999-01-27) abstract page 3, line 11 -page 3, line 25 page 4, line 24 -page 5, line 7 figures 1,2 ---	1-4, 6, 9-12, 14, 17-20, 22
Y	WO 97 08898 A (BRITISH BROADCASTING CORP ;WELLS NICHOLAS DOMINIC (GB)) 6 March 1997 (1997-03-06) abstract	1-27
A	page 4, line 8 -page 5, line 28 page 9, line 25 -page 11, line 4 page 13, line 3 -page 13, line 8 figures 3,4 --- -/--	28-34



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 February 2000

Date of mailing of the international search report

08/02/2000

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/03361

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A	page 796, left-hand column, line 10 -page 796, right-hand column, line 22 figure 8 -----	28-34
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